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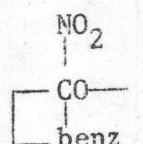
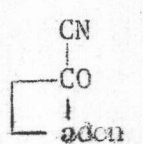
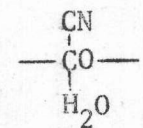
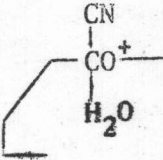
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APPENDIX

Table 9 Vitamin B<sub>12</sub> and some related compound-nomenclature and structure.<sup>(3)</sup>

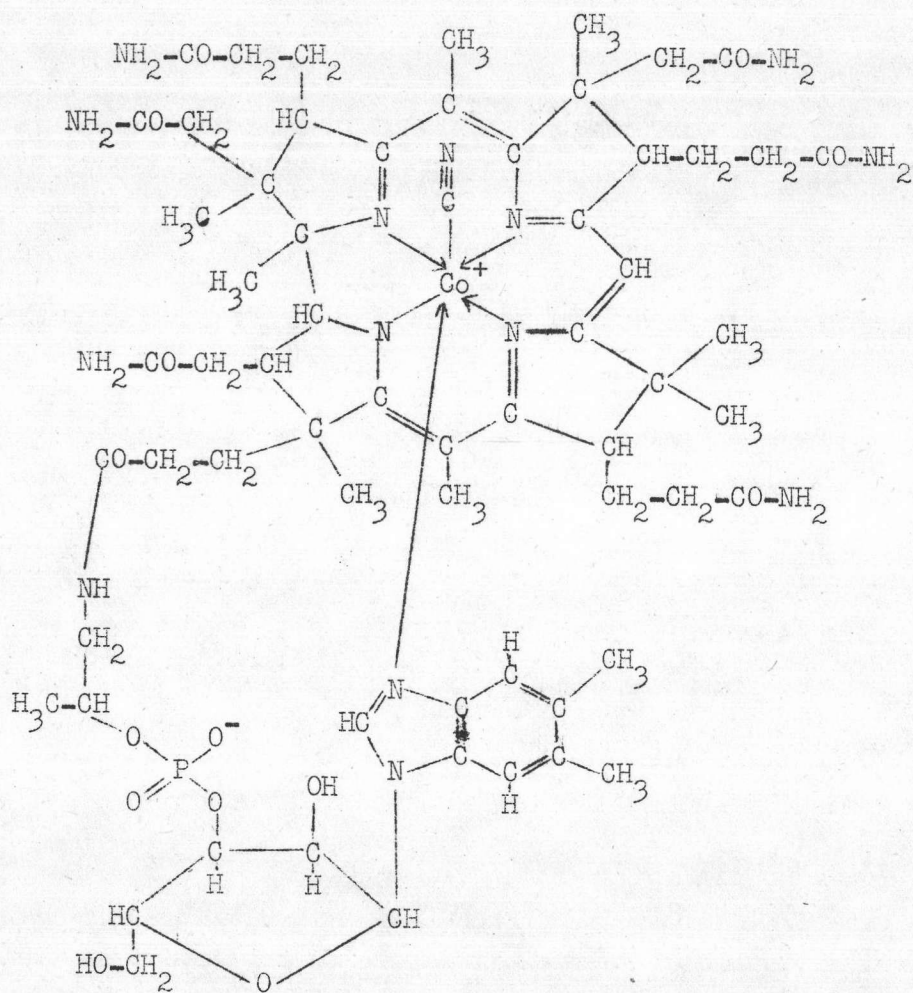
Common name	Ligands of Cobalt		Structure	Semisystematic name	Systematic name
	Above plane	Below plane			
Vitamin B <sub>12</sub>	CN <sup>-</sup>	5,6-dimethylbenzimidazole	$\begin{array}{c} \text{CN} \\   \\ \text{CO} \\   \\ \text{benz} \end{array}$	Cyanocobalamin	$\infty$ -(5,6-Dimethylbenzimidazolyl)-cyanocobamide
Vitamin B <sub>12a</sub>	OH <sup>-</sup>	5,6-dimethylbenzimidazole	$\begin{array}{c} \text{OH} \\   \\ \text{CO} \\   \\ \text{benz} \end{array}$	Hydroxycobalamin	$\infty$ -(5,6-Dimethylbenzimidazolyl)-hydroxocobamide
Vitamin B <sub>12b</sub>	H <sub>2</sub> O	5,6-dimethylbenzimidazole	$\begin{array}{c} \text{H}_2\text{O} \\   \\ \text{CO}^+ \\   \\ \text{benz} \end{array}$	Aquocobalamin	$\infty$ -(5,6-Dimethylbenzimidazolyl)-aquocobamide
	H <sub>2</sub> O	H <sub>2</sub> O	$\begin{array}{c} \text{H}_2\text{O} \\   \\ \text{CO}^{++} \\ / \quad \backslash \\ \text{benzH} \quad \text{H}_2\text{O} \end{array}$	Diaquocobalamin	$\infty$ -(5,6-Dimethylbenzimidazolyl)-diaquocobamide



Common name	Ligands of Cobalt		Structure	Semisystematic name	Systematic name
	Above plane	Below plane			
Vitamin B <sub>12c</sub>	NO <sub>2</sub> <sup>-</sup>	5,6-dimethylbenzimidazole		Nitrocobalamin	∞ - (5,6-Dimethylbenzimidazolyl)-nitrocobamide
Pseudovitamin B <sub>12</sub>	CN <sup>-</sup>	Adenine			∞ - (Adenyl)cyanocobamide
Factor B	CN <sup>-</sup>	H <sub>2</sub> O		Ätiocobalamin	Cyanocobinamide
Factor 3 ribose phosphate	CN <sup>-</sup>	H <sub>2</sub> O		Ätiocobalamin phosphoribose	Cyanocobamide

FORMULA I

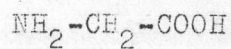
Structural Formula of Vitamin B<sub>12</sub>, Cyanocobalamin<sup>(23)</sup>



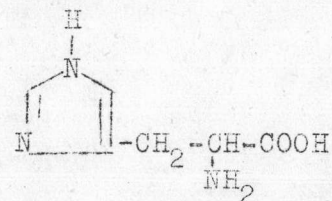
FORMULA II

Stabilizers and their chemical structure (25)

Amino acid

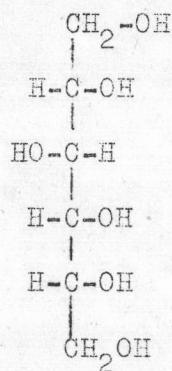


glycine

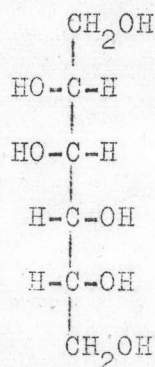


Histidine

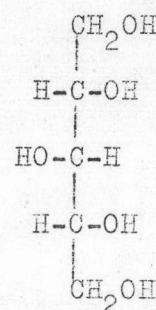
Sugar Alcohol



Sorbitol

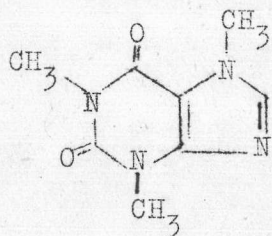


Mannitol

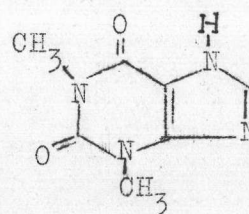


Xylitol

Xanthines



Caffeine



Theophylline

VITA



Name Miss Vichada Rungsisingpipat

Date of Birth August 30, 1950

Place of Birth Bangkok, Thailand

Education

- Chulalongkorn University, Bangkok, Thailand  
Faculty of Pharmaceutical Sciences.  
March 1975.....B.Sc. (in Pharmacy with honor)